2016 **QUARTERLY ISSUE #3**

Acoustic monitoring data show 80% decline in vaquita acoustic activity

The vaquita, the world's most endangered marine mammal (with < 60 individuals remaining), is difficult to monitor by visual surveys. However, its echolocation clicks can be identified using acoustic detectors. Between 2011 and 2015, these detectors indicated that vaquita acoustic activity decreased by 34% per year. In light of these data, the Mexican government announced an emergency 2-year ban of gillnets throughout the species' range. Acoustic detection continues to be used to monitor this and other species for effective management. This research by Jaramillo-Legorreta et al. will be published in the journals *Conservation Biology* and *Conservation Letters* in December. Photo by NOAA (Barb Taylor)

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Bayesian population models help define risks to ESA-listed species

Boyd et al. developed a risk assessment framework to enable more consistent, predictable, and transparent Endangered Species Act (ESA) status assessments. The researchers used a Bayesian population modeling approach to estimate levels of risk for 14 ESA-listed marine species. Those species that had a high risk of declining to a population of < 250 mature individuals after 5 generations were also listed as endangered. The number of populations was useful in differentiating among threatened and "not warranted" species. Photo by NOAA (Sarah Mesnick)

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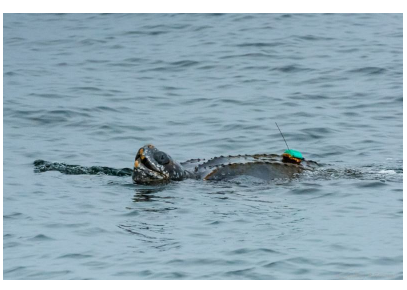
Timing of Pacific Leatherback Conservation Area closure is optimal for leatherback conservation



NMFS established a time-area closure to reduce bycatch of leatherback sea turtles in the California large-mesh gillnet fishery. Eguchi et al. used species distribution models to determine that the timing of this closure was optimal for leatherback turtle conservation. The researchers also used these models with fishery logbook data, leatherback telemetry data, and environmental variables to predict sea turtle foraging habitat and fishing effort. Identifying turtle-fishery overlap hotspots can form the basis for dynamic management approaches. Photo by National Geographic (Jeffrey Berman) NOAA-ESA Permit #15634

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This newsletter is intended to summarize the latest research on protected species from scientific publications that include one or more NOAA Fisheries authors. It will be distributed quarterly with alternate issues highlighting research from the East and West Coasts centers and offices.

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